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**Innovation Capability, Marketing Capability, and Firm Performance: A Two-Nation Study  
of China and Korea**

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# **Innovation Capability, Marketing Capability, and Firm Performance: A Two-Nation Study of China and Korea**

**Abstract:** This research empirically tests the effects of two critical organisational capabilities: innovation capability (IC) and marketing capability (MC) on firm performance in two Asian nations: China and Korea. Drawing on institutional theory and the strategic fit paradigm the authors suggest that the capability requirements may vary across different institutional environments for superior performance. Using data of 385 firms in China and 280 firms in Korean, this research found that generally both capabilities positively influence firm performance; IC is more important in Chinese market, while MC is more vital for firms competing in Korea. Therefore, this study overcomes the limitation of traditional resource-based view in explaining the long researched capability and performance relationship, contributes to the literature by adopting two inter-played theories—institutional theory and the strategic fit paradigm, and exhibits why strategic fit between firms' capabilities and their institutional environment is critical to improve firm performance.

**Keywords:** *China; Korea; innovation capability; marketing capability; institutions; strategic fit*

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## **Innovation Capability, Marketing Capability, and Firm Performance: A Two-Nation Study of China and Korea**

Firms in Asian markets have been experiencing radical transformations in their business landscapes, and seeking a way to keep sustainable growth against threats from unpredictable technological changes and globalisation (Perez-Batres and Eden, 2008). Many achieve superior business performance through developing and using organisational capabilities (He *et al.*, 2013), which are a firm's abilities to assemble, integrate, and deploy valuable resources in combination (Day, 2011, Eisenhardt and Martin, 2000). Asia is a very diversified region, where firms confront unique environments and challenges in different nations. Therefore, these firms need to strategically fit into the environment where they are located (Venkatraman, 1989; Venkatraman and Camillus, 1984). A main objective of this study is to empirically test and confirm the influence of organizational capabilities—innovation capability and marketing capability—on performance in an Asian context, and to attempt to present how different institutional conditions of Asian countries drive firms to select a better-fitted capability over other for firm rents in the given environments.

People's Republic of China ("China" hereafter) and Republic of Korea ("Korea" hereafter), represent two fast growing countries in Asia attributed with unique environments. China, the world's second largest economy and one of the largest recipients of FDI (Chen and Ku, 2002), has been undergoing rapid institutional and economic development (Rowley, 2011). The largest emerging market, China has substantially reformed its formal institutions and economic structure, resulting in unlocked opportunities to investors and creating new markets to corporations and buyers. Korea, once an emerging economy but now the 26<sup>th</sup> ranked market in terms of per capita income in comparison with Japan ranked no. 23<sup>rd</sup> (The World Bank, 2015), also sees rapid

advancement into the industrialised club and boasts of wide recognition of its high-tech products and global expansion. Korea is anticipated to have growth of GDP per capita by 497% in 2050 while China by 2,432% (Goldman Sachs, 2007). Their institutional backgrounds (i.e., legal, cultural, and social frameworks) are quite different from each other, presenting distinct institutional pressures to businesses embedded in them. Thus, understanding how firms strive to match their national institutions and environments can provide meaningful insights for both academics and managers interested in at least these two nations.

Prior studies have deepened our understanding of the natures, consequences, and antecedents of capabilities (Day, 2011; Eisenhardt and Martin, 2000; Morgan *et al.*, 2003; Morgan *et al.*, 2009). This stream of studies provides mounting evidence of capabilities as a source of competitive advantage in various regions, i.e., USA (Morgan *et al.*, 2009), Central Europe (Fahy *et al.*, 2000), and China (He *et al.*, 2013), and industries, i.e., high-tech sectors (Narasimhan *et al.*, 2006), export sectors (Morgan *et al.*, 2003), and industrial dealership (Akdeniz *et al.*, 2010). Two of the very important capabilities are innovation capability and marketing capability that enable organizations to identify market opportunities and to develop new products and processes in order to satisfy consumer preferences (Morgan *et al.*, 2009).

However, there remain several shortcomings in the literature. First, noticeably most of the studies have been undertaken in the setting of a single nation. This leaves unresolved whether a specific capability remains equally effective in different contexts. According to institutional theory, the effectiveness of capabilities can be constrained by the institutional environment (Peng *et al.*, 2008). As a result, international firms should understand the institutional pressures across border to apply different capabilities in each nation to address the environmental challenges. The very important influences of institutional forces, in which the firms are embedded, such as market-support system, regulations, cultures and norms have been largely missing in marketing

research (Ertimur and Coskuner-Balli, 2015). Thus, the prior research's capacity to explain cross-border differences in the link between organisational capabilities (e.g. marketing capability or innovation capability) and performance is limited.

Second, the strategic fit of organisational capacities and environment has been ignored. International firms are running businesses in differing environments that exert distinct impacts on businesses. To achieve superior performance, a firm needs to seek a fit between several factors, including environment, capabilities, strategy, and structure (Venkatraman and Camillus, 1984). Many prior studies seem to assume that particular capability is equally effective in different circumstances. An institutional perspective reinforces the strategic fit perspective in our understanding of heterogeneity in firm performance in different cultures, economies, or communities (Peng *et al.*, 2008). Under particular institutional forces and conditions, there may be more-needed or better-fitted capabilities to obtain business performance. The strategic fit perspective asserts an important co-alignment between the environment and the capability (Venkatraman, 1989). In order to achieve business rents in a more effective and efficient way, capabilities showing a better fit with the external conditions, including institutional framework, have high probability to be selected and nurtured. Moreover, due to scarcity of critical resources such as finance and labour in most of the organisations, not all of the optimizations in business functions and processes can be pursued at the same time. Most efficient and fittest economic decisions must be made to allocate resources (Koberg, 1987), and trade-offs need to be made upon one capability against others. Thus, in order to understand the unique effects of capacities and help managers choose the most effective ones, research needs to consider the environment where the firms operate and how the capability matches the environment.

We make two contributions to the literature by addressing these shortcomings. First, we conduct a two-nation study to expand past research's scope and therefore, are able to present a

broader view of how particular organisational capabilities, i.e. marketing and innovation capabilities, work toward firm performance across different institutional environments in Asia. It is imperative for companies to allocate limited resources and employ capabilities work more efficiently for success and growth. We not only use combined data from two major Asian economies (China and Korea) to confirm the relationships between capabilities (innovation capability and marketing capability) and business performance, but more importantly extend to compare the influences of capabilities on performance in the two institutional environments. Thus, we add to the literature by providing a comparative view of capabilities' role in improving performance. We focus on marketing and innovation capabilities as important drivers for performance in both countries. Following the institutional logic, we theorize and test that they impact differently on performance across countries that are institutionally different.

Second, we add the strategic fit perspective into the capability-performance research by exploring how the compatibility of capability and environment can boost firm performance in an Asian context. The strategic fit paradigm (Venkatraman, 1989) suggests that different degrees of environmental variation require different bundles of organisational resources and capabilities to deal with opportunities and threats in the broad business environment (Aragón-Correa and Sharma, 2003). Firms achieve strategic fits with environments and other strategic factors by developing and using capabilities, and superior performance is contingent on these strategic fits (Venkatraman and Prescott, 1990). We take the institution-based view (Peng *et al.*, 2008) into the theoretical consideration, and strive to find better fitted capability-institution combinations for the two nations. Countries tend to have different environments, especially for many Asian nations that have been undergoing rapidly changing institutional landscape and economic development, under which firms may need different capabilities for growth. We use China and Korea as the lab

to test how firms running business in each nation increase their performance dependent on different capabilities.

The current research, using the lens of the institutional perspective and strategic fit paradigm, expands to explore the comparative effects of two organisational capabilities in different settings, and proposes that innovation capability is more important for firms in China because complex and dynamic environment and institutional support magnify the importance of innovation (Luo *et al.*, 2005; Yam *et al.*, 2004); and marketing capability works more effectively for firms in Korea because this market becomes more competitive, and understanding and fulfilling customer needs turn into a greater driver of business performance (Krasnikov and Jayachandran, 2008). Thus this research also contributes to Asian business literature by providing insights into comparative effects of capabilities on performance between firms operating in two Asian economies, China and Korea.

### **Literature review and hypotheses development**

A business's competitive advantage draws on how well it cultivates and uses capabilities to take advantage of opportunities and address the environmental challenges, especially institutional pressures (Peng *et al.*, 2008). Organizations that align the capabilities utilization and environments can enjoy superior performance (Yin and Zajac, 2004). In this research we use the resource-based view (RBV), the institution-based view and the strategic fit paradigm as the theoretical background.

The RBV proposes that a firm's valuable, idiosyncratic, inimitable, and non-substitutable resources, basically heterogeneity in the organisational embedded levels, drive a competitive advantage (Barney, 1991; Eisenhardt and Martin, 2000). For the first limitation of this traditional proposition, researchers argue that it only partially explains how companies can develop



strategies that allow them to exploit their internal assets and accessible resources (Morgan *et al.*, 2009). Simple ownership of particular resources does not automatically produce firm rents, and is an insufficient condition in explaining the relationship (Priem and Butler, 2001). A second limitation is that the link has not been fully understood in the RBV for more dynamic markets, which require flexible applications or re-appropriations of current existing resources and even demand acquisitions of new properties (Eisenhardt and Martin, 2000). In particular, institutional backgrounds in emerging markets and/or transitional economies may make the proven valuable and rare resources and capabilities among firms in developed countries less useful. Thus, value, rareness or idiosyncrasy of resources and capabilities should be considered to be contextualized (Peng *et al.*, 2008).

We use organisational capabilities in this study to settle the first limitation. Responding to environment changes, managers need to understand how to link initial existing resource conditions to strategic paths (Malik, 2008). Firms use their capacities to deploy resources in order to achieve abnormal performance (Low and Cheng, 2006), and provide their decision makers with a collection of strategic choices for producing significant outputs of certain types (Winter, 2003). Organisational capabilities have two dimensions—core and complementary (Helfat, 1997; Helfat and Raubitschek, 2000). As a core capability, innovation capability (IC) is innovation-based technical knowledge of firms, which is frequently displayed in patents as confidential information or hidden codes of a firm (Teece, 1986); marketing capability (MC) is supporting activity sets such as distribution, customer service, and production required to profit from core capability (Teece, 2006). The RBV wisdom suggests that consistency and fit between resources and capabilities, strategic path choices, and required dynamic abilities determine levels of performance (Malik, 2008).

Using institutional theory and the strategic fit paradigm in this study helps us address the second limitation. Institutions are commonly known as the “rules of the game” which decide how businesses interact with the government, engage in competition and satisfy customers’ wants and needs (North, 1990). According to Scott (1995, p. 33), institutions are “regulative, normative, and cognitive structures and activities that provide stability and meaning to social behaviour.” Companies should have a clear understanding of their institutional challenges and dynamics in order to nurture and apply compatible capabilities and strategies, and be successful in a long run. Therefore, single-minded strategic choices applied across different institutional environments ignore the essential roles of unique formal and informal institutions of territories, and generate disastrous outcomes or marginal rents if not. Bearing this in mind, the conceptualization of IC and MC does not explicitly invoke the degree of environmental dynamism, but the fit of them with the external environment tends to be a critical driver of business performance. The newly developed strategic response theme of institutional theory suggests that the effects of firm resources/capabilities are context-based, and so their values depend on the characteristics of the environments where they are positioned (He *et al.*, 2013). This is in line with the strategic fit paradigm (Venkatraman and Prescott, 1990).

Strategic fit is one of the most widely accepted concepts in the strategy and capability literature (Zajac *et al.*, 2000). It posits that the fit (or congruence, consistence, compatibility, or match) between strategic factors like environment, capabilities, strategy, structure, systems, style, and culture results in organisational performance (Yin and Zajac, 2004). This stream of research suggests that different levels of environmental variation demand compatible organisational resources/capabilities to take advantage of opportunities and avoid threats in the business environment (Aragón-Correa and Sharma, 2003). Firms’ superior performance is contingent on

the strategic fit with environments, which is achieved by developing and allocating appropriate capabilities (Venkatraman and Prescott, 1990; Zajac *et al.*, 2000).

Drawing on these theoretical frameworks, we separate from the debates of the superiority of one capacity over another, and suggest that performance implications of a particular capability may be dependent on the alignment of the capability with the environment. We suggest that IC may be more essential in high-velocity and institutionally dynamic markets like China than in less dynamic environments such as Korea because IC enable organizations by obtaining new ways to provide solutions to meet changing requirements in the fast moving environments (Helfat *et al.*, 2007). In contrast, MC, integrative complementary capability which reorganises and polishes firm routines based on well-managed market information, may be more valued when markets are more stable like Korea.

Before we elaborate on the key effects of organizational capabilities on performance across borders, we briefly discuss and then replicate prior effects of organizational capabilities on performance in order to confirm these effects in our research context to form a foundation for the comparison.

### ***Innovation capability and firm performance***

Innovation is a critical source of competitive advantage (Hult *et al.*, 2004). Current literature has documented innovation's outcomes, nature, and categorization (e.g., products, services, and processes) (Schumpeter, 1994; Tidd *et al.*, 1997). Adler and Shenbar (1990) delineate two types of innovation capability; developing new products and applying fitting processes or technologies to produce these new products. Christensen (1995) proposes four generic categories of innovative assets: scientific research assets, process innovative assets, product innovative assets, and aesthetic design assets. One of the major sources of innovation is

internal R&D that draws on the firm's accumulated knowledge (Knight and Cavusgil, 2004).

Therefore, the notion of innovation capability applies to new process technologies, product technologies, R&D, and, furthermore, how particular production technique or facility is chosen, organised, and managed.

In this study, we define *innovation capability (IC)* as the firm's ability to sense, acquire, and utilise new technologies, ideas, and approaches not only to develop new solutions but also enhance organisational process across the organisation. IC is an ability to sense the environmental changes, to quickly introduce new products, and to adopt new processes in order to create competitive advantage. As Kim (1997) claims, IC is to create new and useful knowledge based on previous knowledge, and it is tacit and non-modifiable, thus, a special asset of a firm. The importance of IC derives from the fact that it is presumed to contribute to dynamic competitive advantage of companies since it enhances their capacity to keep up with, responds to, and initiates the technological changes on an on-going basis. Therefore, IC is one of the decisive dynamic capabilities, since it is not only a firm's proclivity or inclination to adopt ideas but also a willingness to forgo old habits and an activity involved in experimental execution of untested ideas.

In the Asian context, especially fast transforming nations like China and Korea, IC is expected to work as a means for an organisation to achieve desired outcomes by gaining new technologies, knowledge, and ways from external sources and being equipped with readiness to try new experiments (Hult *et al.*, 2004; Jansen *et al.*, 2006). In China, technological breakthroughs and innovations have been strategically pushed by the governments in all levels (Yam *et al.*, 2004). This recent transformation of the institutional conditions such as privatisation of government-controlled firms as well as large amount of foreign investments from liberalized countries have driven Chinese firms to attempt to search for new technologies and new ways of

doing businesses as a means to grow and succeed. Korean firms have a relatively longer history of a free market system than China and democracy as a form of government. They have survived through the hardship of natural resources scarcity by establishing a motivated and educated workforce due to its rigorous education system. Korean government once openly accepted all types of foreign aids and created favourable policy directives for economic development after its democratic governance started to achieve economic recovery after World War II. This early post war innovative drive brought tremendous economic growth to Korea. Korean firms still consistently look for and adopt better techniques, technologies, and new ideas to overcome obstacles. As a result Korea achieved impressive economic reform and sound leadership in the world economy. Although institutional conditions and regulations across the two countries were and are different, innovations and the ability to innovate have shown its tremendous influence on firm performance. Hence, we hypothesise:

**Hypothesis 1: Innovation capability has a positive impact on firm performance.**

### ***Marketing capability and firm performance***

*Marketing capability (MC)* is an organisation's practices, routines, and work patterns applying the resources of the firm to the market-related needs of the business (Vorhies and Morgan, 2005) and also refers integrative processes designed to recognise, collect, and apply the knowledge and skills to add value in the marketing domain (Su *et al.*, 2009). Thus, MC represents the organisational stock of knowledge about the conduct of its marketing activities (Fahy *et al.*, 2000). MC acts as a connecting engine by managing a balanced portfolio of market offerings, presenting intelligent promotions, facilitating an appropriate range of the pricing, and exposing products at the right spot and time. These carefully configured and deployed marketing endeavours can transform the organisational cultural sense of marketplace to customer

satisfaction, market share growth, and profitability. In previous research, capabilities within the marketing arena such as the excellent management of product portfolios, customer relationship management, and marketing planning are verified to be a pivotal driver of abnormal firm performance (e.g., Morgan *et al.*, 2003). Vorhies and Morgan (2005) divide MC into two subsets: specific and architectural capabilities. Specific marketing capabilities are used in transforming resources into valuable outputs based on the classic marketing mix containing five facets: product development, marketing communication, channel management, pricing, and selling, while architectural marketing capabilities are used to orchestrate these tactical tools. Srivastava *et al.* (1999) suggest roles of organisationally embedded marketing activities for better firm (shareholder) value based on three core business processes; product development management, customer management, and supply chain management. Despite their different approaches, the core of MC stays similar as an integrative organisational capability which best utilises stable market-related resources and further enhances the possessed processes and practices to better respond to the market-related needs.

In the Asian context, MC is expected to play a role in linking internal resources and external information, which are necessary for competitive resource reconfiguration (Su *et al.*, 2009; Zhou and Li, 2010). As the economic liberalization in emerging Asian markets like China has replaced government-controlled and planned economies, firms formulate their winning strategies based on the market forces and institutions. The government regulations and restrictions have been lessened and private entities have been increased. Thus, to increase profitability, firms should develop their own structured marketing work patterns to better serve the target customers than competitors in the liberalized market. In the literature, excellent utilization of marketing tools including marketing communication program employment (White

*et al.*, 2003), customer response management (Jayachandran *et al.*, 2004), and pricing strategies (Dutta *et al.*, 2003) have been proven to influence firm performance. We posit MC measured with excellence in marketing execution as a driving force for firm performance. Hence, we hypothesise:

**Hypothesis 2: Marketing capability has a positive impact on firm performance.**

***Strategic fit of capabilities and national institutional contexts: China vs. Korea***

The performance implication of organizational capabilities may vary in different contexts. The strategic fit paradigm identifies fits that boost organisational performance (Venkatraman and Camillus, 1984). Companies that are able to match their capability with their environments to achieve strategic fit are more likely to enhance the effectiveness of the capabilities and achieve higher performance (Venkatraman and Prescott, 1990). One of the key environmental forces is the institutional conditions in a specific territory, “rules of the game” for businesses (North, 1990), which may direct ideal strategic choices and particular resource combinations for the firms to obtain advantageous positions in competition (Peng *et al.*, 2008). International firms’ strategic fit with the institutional challenge in the host country is that they match the strategic resources deployment to the specific requirements of the institutional context, and such a fit helps improve their performance (Peng *et al.*, 2008; Venkatraman and Prescott, 1990).

Firms usually face resource constraints, and need to make strategic choice of making investment for different capabilities (Krasnikov and Jayachandran, 2008). As a result firms need to prioritize investment focusing on a particular capability over others, which is perceived as fitting the environment the most. In the contexts of China and Korea, firms in these two countries are forced to develop their own investment portfolio on capabilities due to the limitation of funds and different resource availability for an appropriate match with the institutional environment.

The literature has highlighted the institutional difference between China and Korea that can impact managers' decisions. For example, Korean firms face difficulty in dealing with regulations, government intervention and different ways of doing business in a foreign country with distinct institutional conditions, which is China (e.g., Guillen, 2003).

An important part of Chinese reform is the emphasis of innovation at different levels institutionally. Led by the central government, nearly every tier of Chinese governments provide tremendous incentives for firms to carry out innovation independently and/or with research institutes, and reward those organisations and personnel who achieve genuine scientific breakthroughs and successful commercialization of technology. The significant change of institutions in terms of national policies has encouraged local and foreign firms to engage in technology R&D and developing IC (Peng *et al.*, 2008). Many international firms from developed economies have located their R&D centres in China in sectors like telecommunications, biotechnology, automotive, pharmaceutical, personal computers, and chemical (Asakawa and Som, 2008). The creation of a “national innovation system” hugely increases China's indigenous IC, and develops a circumstance where many firms rely on their competitiveness on IC.

Another key aspect of institutions in China is the rapidly rising purchasing power of consumers, especially the middle class. In emerging markets, consumers have become more conscious to product quality and variety of choice with more market knowledge and market supply; the growth of middle class especially shows the challenging appetite of consumers (Kravets and Sandikci, 2014; Sheth, 2011). Besides, emerging markets like China are attributed with dynamics as consumers' preference move fast. The challenge faced by businesses is not just excelling in marketing, but having IC to respond to market changes by innovating and developing new products to satisfy customers.



Thirdly, due to the opening policy by government, China has become the second largest recipient of foreign direct investment (UNCTAD, 2013). In Chinese market foreign-invested firms, including big names like Microsoft, Procter & Gamble and IBM, contributed 26.1% of their total R&D expenditures, and the total number of R&D centres established by them reached 1400 at the end of 2010. As a consequence, local firms also have actively pursued R&D activities to survive the tough competition brought by foreign companies (Ju *et al.*, 2013).

IC is especially essential when the institutional conditions are fast evolved from controlled economies to market-focused economies like China, which undergo a set of structural transformations intended to develop market-based institutions. This ability is relevant to rapid adoption of different way of doing business when the institutional environments have changed, i.e., trade barriers are removed and state-owned enterprises are privatized. IC enables emerging-market firms to actively absorb new techniques, skills, and knowledge to form their own depository of resources, and to creatively adapt themselves to the evolving conditions, which may generate efficacy of doing business as well as increase profits. IC helps these firms to address competition challenges and changing consumer wants.

In sum, institutional support, complex and dynamic environment such as market change and unpredictability, competition from international player make IC essential for business success and the innovation-performance link among Chinese firms greater (Luo *et al.*, 2005). IC is outside-in looking, focusing on how to collect new technologies and knowledge and bring them into the organisation to accumulate necessary resources or replace out-dated skills. This capability, assuming novel technologies and skills are context-based, may be more important to Chinese firms that are willing to take a risk for extra returns in their highly dynamic market, than firms within a more stable economy like Korea.

In contrast, Korea has different institutional environment from China. In Korea, industries grow at a less fast pace within a highly competitive environment; Korean customers have a wide range of alternative selections to satisfy their needs. This recent change in the market system is due to mature democracy and rapid industrialisation that Korean firms and the government together strived to achieve ever since the war. Post war economic growth of Korea was once driven by manufacturing, exports and international trades, and later modernization of Korean economy was driven by technological achievement and growth in service sector by large conglomerates known as '*chaebol*' (Park and Yuhn, 2012). Korea became one of the G-20 major economies in 2010, claiming its stand as one of the world's leading nations and exhibiting high living standards and wide urbanization. Innovations and changes were necessary post war strategies for Korean firms for a long while, but the recent institutional surroundings have become similar to those of an industrialized country where firms should formulate growth strategies on its well-developed infrastructure and social system, and focus on high productivity and precise market forecasts in doing business. Thus, in order to stand out, Korean firms now require strong marketing management systems, including impressive new product launch, intelligently-targeted promotions, close collaboration with resellers, and salespersons' well-guided skills, to attract customers and obtain consumer satisfaction for profits. When a firm has proven work patterns to efficiently and effectively operate as a part of processes to integrate resources and develop better market offerings, this capability can be transformed into a competitive advantage. For example, Korean firms tend to invest heavily on customer relationship management (CRM) to enable the development and implementation of more efficient and effective customer-focused strategies (Chang, *et al.*, 2010). Hence, we hypothesise:

**Hypothesis 3a: The positive impact of innovation capability on firm performance is stronger for firms in China compared with firms in Korea.**

**Hypothesis 3b: The positive impact of marketing capability on firm performance is stronger for firms in Korea compared with firms in China.**

## **Methods**

### ***Sample and data collection***

The empirical procedure was carefully designed because the data from China and Korea should be comparable for the objectives of the study. An initial survey was formulated in English and to enhance translation equivalence, the back-translation method was used to develop surveys in Chinese and Korean (e.g., Douglas and Craig, 1983). The authors scheduled the same time frame for the initial contact to the respondents, survey distribution, follow-ups, and data collection. The survey administration was executed by well-trained research experts with the support of a third party in each country. In China, surveys were sent to marketing decision makers of 1,000 leading firms via fax and mail with a letter from the administration of Wuqing Development Zone, which is one of the local government affiliations in Beijing and Tianjing, asking for their cooperation. In Korea, a letter from Korea Marketing Research Centre, which is in Seoul and a non-profit organisation for academic research, was sent with a questionnaire to marketing departments of Korean top 500 companies in terms of sales. Respondents were selected based on their self-identified expertise and responsibilities relating to marketing functions. There were a total of two follow-up calls in each country to encourage their participation and data collection occurred for six weeks. The data were collected in 2012. Following Narver and Slater (1990), the unit of analysis in our study was the respondent's 'business unit' as it operates in its principal served market. Finally, we managed to obtain 385 usable responses from China and 280 from Korea for a response rate of 38.5% in China and

56.0% in Korea. Most of the responses are from marketing related department directors and managers and their average working years was 6.0 in China and 7.4 in Korea.

“Table 1 goes about here”

### ***Measures***

All of the measures used in this study were drawn from the existing literature except IC. 7-point, Likert-type scales with anchors 1=strongly disagree to 7=strongly agree, were used across the survey.

To develop the measures for IC, raw items and conceptual scales were generated through the relevant literature reviews. In order to define IC as an organisational capacity to innovate, not to limit as only new product development or market offering related capability, conceptual approaches of Adler and Shenbar (1990) and Christensen (1995) were adopted. After three times of discussions among authors and two additional marketing practitioners, three most critical aspects of IC were selected. These measures include possession of process to adopt technological innovations to produce new products or generate new service offerings, abilities to cultivate R&D activities to collect scientific research assets to develop new solutions, and readiness to accept and apply process innovations across the organisation. All items for IC were verified by the item-to-total correlation and Cronbach's alpha. MC was asked in a total of six items, based on the functional approach of MC (e.g., O'Cass and Weerawardena, 2010; Vorhies and Morgan, 2005).

For the dependent constructs, three items of two dimensions: effectiveness and efficiency were adopted. Sales and market share growth were the measures for effectiveness, using a scale that tapped the degree to which the firms' market-based goals has been accomplished (e.g., Vorhies and Morgan, 2003). Profitability, using perceptual scales related to performance over the past twelve months was asked to measure efficiency.

We included a few control variables that are linked to business performance, such as firm size, age, and industry. Firm size is captured by the number of employees, and firm age is gauged as the number of years of operation in business (e.g., Gu, Hung, and Tse, 2011). Following Armstrong and Sweeney (1994), industry type was measured through a 32 item standard industrial classification listing, and then re-grouped for data analysis. Respondents were asked to check one of the 32 categories which best describes their company or write their industry type if not found. The industry groups were subsequently re-classified into three major industry types first—manufacturing, service, and trade. After carefully observing the data set, we decided to separate electronic from manufacturing and IT from service due to their possibly different requirements and conditions. Thus, a total of five—manufacturing, electronic, service, IT, and trade—industry types were used as a logical subdivision of the diverse range of industrial classifications. The industries of the sampled firms were manufacturing (China: N = 158, 41%; Korea: N = 104, 37%), electronic (China: N = 146, 38%; Korea: N = 33, 12%), and service (China: N = 23, 6%; Korea: N = 62, 22%). Others were IT, trade, and others. Industry type was re-coded as a dummy variable for data analysis.

### ***Measurement validation***

The two-step approach developed by Anderson and Gerbing (1988) was adopted to analyse our data. We conducted AMOS 18.0 to test the confirmatory factor analysis (CFA) for validating the measurement and IBM SPSS 21.0 to run multiple regressions: OLS method and test the hypothesised relationships. Means, standard deviation, and inter-construct correlations are presented in Table 2. The validity of the scale items used was assessed via principal-axis factoring which completed using an eigenvalue of 1.0 and factorings of 0.50 as the cut-off point suggested by Zaichkowsky (1985). Convergent validity of items was assessed using three criteria

suggested by Hair *et al.* (2006): 1) the reliability of each scale ranged between 0.80 and 0.90, which was accepted using 0.70 as the cut-off point suggested by Nunnally (1978); 2) the composite reliabilities of each construct is greater than 0.80, which was higher than the cut-off of 0.70; 3) AVE of all constructs exceeded the threshold levels of 0.50. Therefore, the internal consistency of the scales was acceptable.

“Table 2 goes about here”

We adopted the first order model for the measurement. The confirmation of convergent validity presented that the factors associated with all the items loaded significantly on the corresponding latent construct (Bagozzi *et al.*, 1991). In Table 3, the fit statistics were appropriate and the overall factor loadings of all items ranged between 0.65 and 0.93, which exceeded the 0.50 threshold for the structural model.

“Table 3 goes about here”

We performed a chi-square difference test to assess discriminant validity by comparing two possible pairs (Bagozzi and Phillips, 1982). Table 4 shows the difference between a restricted (i.e., the correlation of two constructs is fixed at 1) and non-restricted model. If the difference of chi-square is bigger than 3.84 ( $\Delta\chi^2 > 3.84$ ; Anderson, 1987; Bagozzi and Phillips, 1982), a critical value at the 0.05 significant level in all instances confirms the discriminate validity of two structures. As presented, all chi-square differences were clearly significant, indicating discriminate validity of the scales.

“Table 4 goes about here”

### ***Common methods bias check***

Two types of statistical analysis were conducted to assess the threat of common methods bias. First, we conducted Harman’s single-factor test, which is one of the most widely used

statistical techniques (Podsakoff *et al.*, 2003). The result of EFA with the nineteen scale items including firm size, firm age, and industry types revealed seven factors that had eigenvalues greater than 1.00. The largest explained percentage of variance was 28.07%, and we found that no single factor was responsible for most of the variance. To overcome the prevalent critics of Harman's single-factor analysis, we conducted the second method to assess the threat—Lindell and Whitney's (2001) marker variable test. This technique is to include a single variable that is theoretically unrelated to at least one other variable in the model, and to test its statistical associations with the focal variables. Lindell and Whitney (2001) argue that "this theoretically unrelated variable provides discriminant validity to the design, albeit not to the extent that is present in the factorial manipulation characteristic of a classical multitrait-multimethod design" (p. 115).

As a marker, working period (How many years have you been working in this company?) was used due to its low relevance with the study. The average correlation between "working period" and other variable shows low and insignificant ( $r = 0.05$ ,  $t = 1.36$ ). The chi-square difference test was run to see common method variance-adjusted correlations using an equation from the study by Malhotra *et al.* (2006). As a result, we found that the adjusted correlations were not significantly different from the pre-adjustment correlations. Therefore, through these two statistical tests, we conclude that the study data set is not severely contaminated by the common methods bias.

## **Analyses and results**

### ***Hypotheses analysis***

Since our data were collected in China and Korea respectively, we first compared the means regarding each variable from the two countries before analysing the hypotheses. We

realised that means of each variable in China are higher than Korean data ( $p < 0.05$ ). As Keen *et al.* (1982) exhort that data from different foreign locations should be established primarily through standardization of data (z-score, with  $\mu = 0$  and  $\sigma = 1$  standard normal distribution) to deal with mean differences, scale standardization for each country data was conducted. First, the mean-centring technique was used by subtracting the mean value of each focal variable, resulting in a zero mean. Second, every resulted data value was divided by the standard deviation to prepare the whole data set to test hypotheses.

The results of hypothesis tests in multiple regression analysis exhibited a good model fit to our normalised data ( $R^2 = 0.36$ , Adjusted  $R^2 = 0.35$ ,  $F(9, 665) = 40.41$ ,  $p < 0.01$ ). Table 5 shows the standardized coefficient values for the causal paths of main effects (H 1 & 2). Our empirical results demonstrated that all of our hypotheses concerning the main effects were supported by the entire data. Our findings indicated IC and MC do have a positive relationship ( $\beta = 0.33$ ,  $\beta = 0.34$ ;  $p < 0.01$ , respectfully) with firm performance, thus, Hypothesis 1 and 2 were supported.

We again performed multiple regressions to test the research model based on China data and Korea data separately to compare the coefficient values in the focal relationships across the nations. As predicted, IC more strongly influenced firm performance in China than Korea ( $\Delta\chi^2 = 22.51$ ,  $\beta = 0.47$ ,  $p < 0.01$ : China;  $\beta = 0.19$ ,  $p < 0.01$ : Korea), whereas MC had higher impact on firm performance in Korea than China ( $\Delta\chi^2 = 5.94$ ,  $\beta = 0.26$ ,  $p < 0.01$ : China;  $\beta = 0.40$ ,  $p < 0.01$ : Korea). Therefore, both Hypothesis 3a and Hypothesis 3b were supported. Among control variables, industrial sectors exhibited noticeable distinctions between two countries. Electronic, service, and trade types showed significant impacts on firm performance in China ( $\beta = 0.22$ ,  $0.17$ , and  $0.14$ ,  $p < 0.05$ , respectfully), while firm age showed a negative association with firm performance in Korean. ( $\beta = -0.14$ ,  $p < 0.05$ ).



“Table 5 goes about here”

We further investigated the association of capabilities and performance in every industrial sectors to see whether industry, as a recipient of institutional frameworks, has an effect on the link of capabilities and performance. We separated the sample based on country and industries, and ran regression. Our regression tests show that the hypothesized relationships hold across manufacturing sector (N= 158, China; N =104, Korea), and electronic sector (N =146, China; N = 33, Korea). For other sectors (IT, service, trade, and others), the sample sizes are too small for regression. Thus these further tests tend to suggest that industry does not play a role affecting capability-performance association.

## **Discussions**

Our major aim of this study is to examine how the effects of two organisational capabilities (IC and MC) on business performance vary across institutionally different Asian countries, namely China and Korea. Consistent with the logic of institutional theory and the strategic fit perspective, our findings suggests that IC works more effectively for firms operating in China’s institutional environment, while MC fits organisations competing in Korean market. This finding suggests that institutional backgrounds and market environments should be considered to develop a set of required capabilities. In a country like China where the institutions are undergoing dynamic transformation, IC may be more essential, whereas MC is more important in an industrialized and institutionally stable economy like Korea.

Chinese government has launched nationwide promotion of technological innovation such as the reformed R&D funding system for innovative activities (Yam *et al.*, 2004). Firms in China may be highly motivated to carry out innovation and develop IC as a coercive reaction to such formal institutional forces (Peng *et al.*, 2008). In order to compete in the recently liberalized

market whose prices are decided by the demand and supply and which is different from the controlled industry structures which firms in China long had been protected within, firms try untested ideas and openly adopt creative approaches. Korea has recently been categorized as a newly industrialised Asian economy (IMF, 2011), indicating its completion of changeover to an advanced economy with a variety of balanced developed businesses. For Korean firms, due to the accumulation of knowledge during economic transformation, many of them have already replaced outmoded facilities with modern technologies, such as factory automation and CRM systems, boosting productivity and market competitiveness. Therefore, most of mid- or large-sized Korean firms have long invested to be equipped with necessary innovations and technologies, and the difference in possessed technologies across firms has decreased. Thus, IC is considered to be mandatory in the tool kit, and becomes a relatively weaker influencer for performance for Korean firms than their Chinese counterparts, where the levels of IC across firms extremely vary.

Our findings also confirm that in general IC and MC are linked with organisational performance in the broad territory of two Asian markets, in line with the research conducted in single-nation contexts and industrialised markets i.e., USA (Morgan *et al.*, 2009) and Central Europe (Fahy *et al.*, 2000).

This study makes several meaningful contributions to relevant literature of the RBV and institutional theory and Asian business and management literature. First, to overcome the limitations of RBV, we empirically tested the critical role of organisational capabilities (IC and MC) as an employment mechanism to obtain better performances in a two-nation setting. Thus, our study responds to some of long-standing research inquiries. Wright *et al.* (2005) stress the heterogeneity in firm resources and capabilities and managerial flexibility in re-configuring, developing, and using these resources and capabilities as critical questions in furthering the

research agenda on developing country firms. Our study responds to Malik's (2008) proposal by developing and testing a framework on the heterogeneity in organisational capabilities in two Asian nations. Thus, we go beyond past research and expand to provide a comparative view of the link between capabilities and performance under different market environment and institutions.

Second, we put the comparative study of firms operating in Chinese and Korean markets under the lens of the institutional theory and strategic fit perspective so as to be able to inform how different institutional backgrounds of nations may call for varied configurations of capabilities, and how the congruence of capability and environment can increase performance among Asian firms. Specifically, by adopting institutional theory into this two country comparison study, we attempted to settle the limitation of the RBV and challenge the assumption that organisational capabilities are equally important across different economic and social settings, and proved the importance of understanding varied institutional environments for the success of firms. The institutional theory clearly explains how those companies that manage to cultivate proper capability in line with the external environment and institutions enjoy better performance (Venkatraman and Prescott, 1990). This research considers the environmental factors and institutions of two important Asian nations, and suggests that firms in each nation may see different effects of IC and MC on performance. Thus we apply and test the strategic fit study into the Asian context and enrich the literature with the performance implications of the strategic fit of organisational capability and external environment.

Finally, we also contribute to the Asian business and management literature by conducting comparative research into Chinese and Korean firms. China and Korea are two unique Asian countries, both of which have been undergoing rapid economic development and exerting impact on world economy. Both nations have attracted huge amount of FDI. They also show multiple

distinct characteristics, institutional backgrounds, and provide very different market environments. As we indicate in the research, indigenous and exogenous firms need to be careful in prioritizing capabilities for growth under each environment.

Our findings provide important implications for practitioners. First, overall, building and managing organisational capabilities is essential for a firm's success in Asian nations. IC and MC are two key capabilities that can contribute to firm performance this region. Second, managers should also pay attention to the institutional conditions of the market territories and strategic fit of the capability and the market environment, which has significant performance implications. Managers should understand that a successfully and proven strategic choice in one region does not necessarily suggest a desirable resource configuration in another territory, when considering international expansion of business. More explicitly, firms in an emerging nation whose institutional conditions are similar to those of China (i.e., dynamic market structure, reduced control and regulations from government, and relationship-based cultures) may need to emphasize IC; while companies in a more stable economy like Korea need to stress MC because this market is more stable, competitive, and sophisticated.

### ***Limitations and further directions***

There are several limitations of the study. First, this research has been conducted with the survey responses provided by one key informant per organisation, and thus may cause common method variance. Although such an approach has long been used in the strategy research domain, using multiple informants may be recommended for future research.

Second, difficulty in collecting the data at business unit level has prevented us from including objective measures of performances. Other researchers may be happy to overcome this difficulty and test similar relationships with objective indicators of firm performance.

Third, we only investigated two specific capabilities, leaving the relationship between them and with other capabilities such as production or operations capabilities unconsidered. Thus it would be interesting to see how these two capabilities interact to impact performance, and how other capabilities work to further increase performance.

Fourth, given the scope and methodology of our research, our models have left some variance unexplained, with which peer researchers may feel interested to address. For example, there may be other organizational resources/capabilities in addition to marketing and innovation capabilities that drive firm performance, for instance networking capability, production capability, among others. Besides, we did not control for ownership, which can be an important institutions influencing firms' decision making, capability use and performance.

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**Table 1. Information of Respondents**

		China (N= 385)		Korea (N= 280)	
		No.	%	No.	%
Industry	Manufacturing	158	41.0	104	37.1
	Electronic	146	37.9	33	11.8
	IT	21	5.5	43	15.4
	Services	23	6.0	62	22.1
	Trade	25	6.5	23	8.2
	Others	12	3.1	15	5.4
Firm Size (Business Unit Size)	100 employees or less	37	9.6	50	17.9
	101~999 employees	312	81.0	90	32.1
	1000 employees or more	36	9.3	130	46.4
	N/A	0	0.0	10	3.6
Function	Marketing	49	12.7	59	21.1
	Sales	24	6.2	58	20.7
	General Management	251	65.2	23	8.2
	Strategy/Business Planning	42	10.9	44	15.7
	R&D	6	1.6	46	16.4
	Others	13	3.3	50	17.9
Title	Director/ General Manager	251	65.2	63	22.5
	Manager/Assistant Manager	97	25.2	138	49.3
	Senior Staff/Team Staff	36	9.4	77	27.5
	N/A	1	0.3	2	0.7
Working Year	Mean	6.0 years		7.4 years	
	Median	10 years		8 years	
	Max	31 years		23 years	
	Min	2 years		2 years	

**Table 2. Means, standard deviation, and correlations**

	# items	All Mean (S.D.)	China Mean (S.D.)	Korea Mean (S.D.)	CR	AVE	IC	MC	FP	Age	Size
IC	3	5.30 (1.20)	5.73 (0.93)	4.71 (1.27)	0.81	0.58	<i>0.85</i>				
MC	6	5.44 (1.05)	5.94 (0.75)	4.75 (1.04)	0.81	0.51	0.59**	<i>0.80</i>			
FP	3	5.39 (1.26)	5.88 (0.98)	4.70 (1.29)	0.84	0.64	0.53**	0.53**	<i>0.90</i>		
Age	1						0.03	0.00	0.01	n/m	
Size	1						0.08*	0.14**	0.04	0.34**	n/m

\*\*p< 0.01; \*p< 0.05; IC: Innovation capability, MC: Marketing capability, FP: Firm performance, Age: Firm age, Size: Firm size; Coefficient alphas are shown in italics on the diagonal; CR stands for composite reliability and AVE stands for average variance extracted; Firm size and firm age were transformed by taking logarithm; n/m: not meaningful; N= 665.

**Table 3. Convergent validity (First-order full CFA)**

	Construct	Factor Loading (S.E.)
<b>IC</b>	Technological innovation capability	0.80
	Abilities to cultivate R&D activities	0.87 (0.046)
	Process innovation capability	0.86 (0.047)
<b>MC</b>	Pricing	0.68
	New product launch	0.65 (0.063)
	Distribution –network	0.69 (0.056)
	Distribution –partnership	0.67 (0.057)
	Promotion	0.84 (0.076)
	Selling	0.81 (0.068)
<b>FP</b>	Sales growth	0.93 (0.037)
	Market share	0.91 (0.038)
	Profitability	0.81
$\chi^2 = 386.959$ , $d.f. = 51$ , $p = 0.000$ ; $RMR = 0.08$ , $GFI = 0.91$ , $CFI = 0.94$ , $TLI = 0.92$ , $RMSEA = 0.10$ , N= 665		

IC: Innovation capability, MC: Marketing capability, FP: Firm performance

**Table 4. Discriminant validity**

Compared Constructs	Unrestricted	Restricted	$\Delta\chi^2$
	Model $\chi^2$	Model $\chi^2$	
Marketing Capability - Firm Performance	588.99	746.96	157.97
Innovation Capability - Firm Performance	542.71	580.73	38.02

**Table 5. Hypothesis testing: Regression analysis results**

Dependent Variables	Firm Performance					
	All China + Korea (n= 665)		China (n= 385)		Korea (n= 280)	
<b>Control Variables</b>						
Firm Size (Ln)	-.01 (-.17)	.01 (.23)	-.05 (-.98)	-.01 (-.18)	.12 (1.73)	.10 (1.60)
Firm Age (Ln)	.04 (.94)	-.04 (-1.21)	.05 (.86)	.02 (.43)	-.04 (-.53)	-.14 (-2.35)*
Manufacturing	-.06 (-.64)	.01 (.11)	-.05 (-.32)	.15 (1.30)	-.11 (-.79)	-.06 (-.51)
Electronic	-.01 (-.13)	.07 (.88)	.03 (.22)	.22 (2.01)*	-.12 (-1.16)	-.04 (-.45)
IT	.04 (.63)	.08 (1.39)	-.02 (-.25)	.06 (.93)	.10 (.97)	.12 (1.27)
Service	-.02 (-.30)	.06 (.99)	-.01 (-.13)	.17 (2.58)*	-.05 (-.39)	-.01 (-.06)
Trade	.03 (.50)	.05 (1.05)	.06 (.69)	.14 (2.08)*	-.02 (-.21)	-.01 (-.09)
<b>Independent Variables</b>						
Innovation Capability (IC)		.33 (8.54)**		.47 (9.27)**		.19 (3.21)**
Marketing Capability (MC)		.34 (8.48)**		.26 (5.10)**		.40 (6.40)**
R <sup>2</sup> (Adj. R <sup>2</sup> )	.01 (-.00)	.36 (.35)	.01 (-.00)	.44 (.43)	.04 (.02)	.30 (.28)
F	.93	40.41	.76	32.83	1.63	13.13

Notes: Industry configurations in China data: Manufacturing (158), Electronic (146), IT (21), Service (23), trade (25), and others (12); Industry configurations in Korea data: Manufacturing (104), Electronic (33), IT (43), Service (62), trade (23), and others (15); Firm size and firm age were transformed by taking logarithm; \*\*p< 0.01; \*p< 0.05



## **Appendix: Measurement items**

### **Innovation capability** (7 = much better than competitors, 1 = much worse than competitors)

*The following statements assess your firms' strengths in the following innovation activities.*

*Relative to your major competitors, please rate your business unit in the following areas.*

1. We have the process to adopt technological innovations to produce new products/services offerings
2. We have abilities to cultivate R&D activities to collect scientific research assets to develop new solutions
3. We are ready to accept and apply process innovations across the functions in the organisation.

### **Marketing capability** (7 = much better than competitors, 1 = much worse than competitors)

*The following statements assess your firms' strengths in the following marketing activities.*

*Relative to your major competitors, please rate your business unit in the following areas.*

4. We respond competitors' pricing tactic and customer change by using your pricing skills (*Pricing capability*)
5. We have skills in successfully launching new product (*Product Capability*)
6. We work closely with the distributors/retailers in the market (*Distribution Capability*)
7. We provide high levels of support to attract and retains the best distributors/ retailers in the market (*Distribution Capability*)
8. We effectively manage advertising activities (*Communication capability*)
9. We skilfully use sales promotion activities (*Communication capability*)

### **Business performance** (7 = much better than competitors, 1 = much worse than competitors)

*Relative to your major competitors, please evaluate the performance of your business over the past year*

10. Growth in sales revenue
11. Market share growth in the current market
12. Business unit profitability in the current market